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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,130	01/19/2001	Lenny Lipton	300.57	9479

7590 09/09/2005

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/766,130

Applicant(s)

LIPTON ET AL.

Examiner

Jennifer T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to request for reconsideration filed on 5/11/05.

Claim Objections

2. Claim 6 is objected to because of the following informalities: the phrase "removing the waveform" in claim 6, line 5 should be changed to -- removing the waveform; and--.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art Figs. 1-5 (AAPA) in view of Huang (Patent No.: US 6,268,840).

Regarding claims 1 and 11, AAPA teaches a method for driving a segmented pi-cell modulator in a stereoscopic image viewing system, comprising applying an alternating polarity carrier waveform to the pi-cell within a time period that the pi-cell is energized (Fig. 2, supporting specification page 3, line 29 to page 4, line 17).

AAPA differs from claims 1, and 11 in that it does not specifically disclose the waveform is unipolar, wherein the carrier waveform does not change polarity. However, referring to Fig. 25B, Huang teaches the unipolar waveforms, wherein the combining the frame sequence T1, T2, T1, T2, T1, T2 is positive waveforms and the combining the frame sequence T3, T4, T3, T4, T3, T4 is negative waveforms (col. 15, line 64 to col. 16, line 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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incorporate the unipolar waveform as taught by Huang in the system of AAPA in order to reduce in switching frequency resulting in reducing power consumption of the display driver (col. 16, lines 2-5).

Regarding claims 2, 7, and 12, AAPA teaches the waveform is in the range of 1-2 kHz (in the specification page 4, lines 10-12).

Regarding claims 3, 4, 8, 9, 13 and 14, AAPA teaches a stutter start waveform is applied to the pi-cell for a brief period of time when power is first applied (in the specification page 2, lines 24-29).

Regarding claim 5, 10 and 15, although the prior art figures not specifically teach the small rest period is approximately a few hundred milliseconds. However, it would have been obvious to obtain small rest period is approximately a few hundred milliseconds in order to optimally activate the cell.

Regarding claim 6, AAPA teaches a method for driving a segmented pi-cell modulator in a stereoscopic image viewing system, comprising:

applying a modulating waveform having a carrier signal during the first time period;
removing the waveform; and

applying the waveform having a carrier signal during the second time period (Fig. 2, supporting specification page 3, line 29 to page 4, line 17).

AAPA differs from claim 6 in that it does not specifically disclose the carrier signal during the first time period does not change polarity and the carrier signal during the second time period opposite the first polarity does not change polarity. However, referring to Fig. 25B, Huang teaches the unipolar waveforms wherein the polarity does not change in the first time

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period (i.e., the combining the frame sequence T1, T2, T1, T2, T1, T2 is positive waveforms) and the second polarity (i.e., the combining the frame sequence T3, T4, T3, T4, T3, T4 is negative waveforms), opposite to the first polarity, does not change in the second time period (col. 15, line 64 to col. 16, line 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the unipolar waveform as taught by Huang in the system of AAPA in order to reduce power consumption of the display driver.

5. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art Figs. 1-5 (AAPA) in view of Hayashi et al (Patent No.: US 5,541,619).

Regarding claims 1 and 11, AAPA teaches a method for driving a segmented pi-cell modulator in a stereoscopic image viewing system, comprising applying an alternating polarity carrier waveform to the pi-cell within a time period that the pi-cell is energized (Fig. 2, supporting specification page 3, line 29 to page 4, line 17).

AAPA differs from claims 1, and 11 in that it does not specifically disclose the waveform is unipolar, wherein the carrier waveform does not change polarity. However, referring to Fig. 7E, Hayashi teaches the modulation control signal to be positive in the frames periods $T(4m+1)$, $T(4m+2)$, and $T(4m+3)$ in tone representing cycle 1 period and negative in the frames period $T(4m+4)$ in tone representing cycle 1 period (col. 11, lines 20-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the waveform as taught by Hayashi in the system of AAPA in order to reduce flickering on the picture, resulting in an improvement of a picture quality (col. 7, lines 30-32).

Regarding claims 2, 7, and 12, AAPA teaches the waveform is in the range of 1-2 kHz (in the specification page 4, lines 10-12).

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Regarding claims 3, 4, 8, 9, 13 and 14, AAPA teaches a stutter start waveform is applied to the pi-cell for a brief period of time when power is first applied (in the specification page 2, lines 24-29).

Regarding claim 5, 10 and 15, although the prior art figures not specifically teach the small rest period is approximately a few hundred milliseconds. However, it would have been obvious to obtain small rest period is approximately a few hundred milliseconds in order to optimally activate the cell.

Regarding claim 6, AAPA teaches a method for driving a segmented pi-cell modulator in a stereoscopic image viewing system, comprising:

applying a modulating waveform having a carrier signal during the first time period;

removing the waveform; and

applying the waveform having a carrier signal during the second time period (Fig. 2, supporting specification page 3, line 29 to page 4, line 17).

AAPA differs from claim 6 in that it does not specifically disclose the carrier signal during the first time period does not change polarity and the carrier signal during the second time period opposite the first polarity does not change polarity. However, referring to Fig. 7E, Hayashi teaches the unipolar waveforms wherein the polarity (V_1 , V_2) does not change in the first time period (i.e., the frames periods $T(4m+1)$, $T(4m+2)$, and $T(4m+3)$ in tone representing cycle 1 period) and the second polarity ($-V_1$, $-V_2$), opposite to the first polarity, does not change in the second time period (i.e., the frames period $T(4m+4)$ in tone representing cycle 1 period) (col. 11, lines 20-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the unipolar waveform as taught by Hayashi in

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the system of AAPA in order to reduce power consumption of the display driver and eliminate the artifact.

6. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

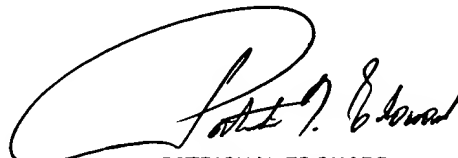
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T Nguyen** whose telephone number is **703-305-3225**. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Patrick Edouard** can be reach at **703-308-6725**. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JNguyen
8/29/05



PATRICK N. EDOUARD
SUPERVISORY PATENT EXAMINER